— CITY OF PORTLAND —
ENVIRONMENTAL SERVICES

1120 SW Fifth Avenue, Room 1000, Portland, Oregon 97204 ▪ Nick Fish, Commissioner ▪ Michael Jordan, Director

November 12, 2015

Alex Liverman
Oregon Department of Environmental Quality
Northwest Region Cleanup Program
700 NE Multnomah St., Suite #600
Portland, OR 97232

Subject: Review of Proposed DEQ Source Control Decision for the Christenson Oil Company (ECSI #2426)

Dear Alex:

This letter provides comments from the City of Portland Bureau of Environmental Services to the Oregon Department of Environmental Quality (DEQ) based on our review of DEQ's proposed Source Control Decision (SCD) for the Christenson Oil facility located at 3821 NW St. Helens Road. Contaminants from this site have the potential to migrate to the Willamette River via stormwater and preferential groundwater discharges to the municipal stormwater conveyance system affiliated with Outfall 18. As noted in the SCD, the U.S. Environmental Protection Agency identified elevated concentrations of a number of contaminants in river sediment in the reach that includes Outfall 18 (i.e., Area of Potential Concern [AOPC] 19). In order to ensure that future discharges from Outfall 18 do not pose recontamination risk to the river, DEQ must ensure that identified sources to the municipal system conduct a thorough characterization of site contaminant pathways and implement source controls where warranted to meet inriver goals. Based on the City's review of the proposed SCD, sufficient information has not been provided in the document to demonstrate that these two objectives have been met and to support issuance of a DEQ source control decision at this time. Our specific comments are provided below.

Stormwater Pathway Evaluation

1. Site stormwater and stormwater solids data plotted on DEQ curves underestimate the potential significance of site contaminants of interest. For sample results that were not detected, curve plots include a value of half the method reporting limit (MRL) to represent the results. This adds a low bias to this line of evidence; non-detected data should be plotted at the value of the MRL to acknowledge that the sample concentrations may have been close to that value. Doing so would provide greater transparency to the data evaluation.
2. MRLs for data used to characterize some site contaminants of interest exceed DEQ screening level values (SLVs) and in the case of at least one contaminant, also the knee of DEQ guidance curves – two main lines of evidence being utilized in the proposed decision. For example, bis (2-ethylhexyl) phthalate (BEHP) stormwater results presented in Table 4 were less than the MRL (<5 µg/L), but the MRL exceeded the SLV (2.2 µg/L) and the knee of the curve (3.0 µg/L). The SCD should include discussion of this and other uncertainties in the site stormwater pathway data set.

3. In addition to the uncertainty in the stormwater data set discussed in the previous comment, there are errors in the lines of evidence utilized to determine that the site discharges of BEHP do not warrant control. BEHP is identified as being elevated in AOPC 19 and was detected above the knee of the curve in site catch basin sediments collected above and below the catch basin filter indicating that a source is present and site source controls may not be sufficient to prevent BEHP from migrating offsite. On page 8, the SCD incorrectly states that phthalates were not found in oil-water separator solids. As shown on Table 2 and Figure 8n, oil water separator solids were not analyzed for BEHP. Additional data or lines of evidence may be needed to support DEQ's conclusion that further source control is not warranted.
4. Cadmium consistently has been detected in site stormwater above the SLV indicating that sources are present, and if the non-detected values in the NPDES data set are replotted on the guidance curve at MRLs, cadmium also plots above the knee of the curve. Cadmium is identified as being elevated in AOPC 19. Additional data or lines of evidence, such as comparison to DEQ Background Levels, are needed to support DEQ's conclusion that further source controls are not warranted.
5. Table 1 only includes a portion of the NPDES data plotted on the guidance curves as a line of evidence. Data are missing data from four stormwater sampling events conducted between 2013 and 2014. Table 1 should include all NPDES data plotted on the curves and utilized as a line of evidence. Also, adding total PAH and PCB values to Tables 1 through 4 and Table 6 would facilitate an easier comparison to calculated totals plotted on the curves.
6. Silver is plotted incorrectly on Figure 8i. Following convention used in the curves, the value should have been plotted at 0.05 µg/L, not zero. Per comment 1, plotting at the relevant MRL of 0.1 µg/L will put this contaminant above the curve knee. Silver is a listed contaminant for AOPC 19.

Groundwater Pathway Evaluation

The information presented in the SCD does not support DEQ's conclusion that the site has demonstrated an incomplete pathway for site groundwater to migrate to the Willamette River via the Basin 18 conveyance system, based on the following:

7. Groundwater data collected on site indicates that free product is present in a small area of the site and that contaminants have been detected in monitoring wells downgradient of the site and upgradient of the City storm line in NW St. Helens Road. The SCD states that there has been a decreasing trend in petroleum hydrocarbon concentrations over time, but only data from one monitoring event (June 26-27, 2013) is presented in SCD figures. Inclusion of a data table showing groundwater concentrations at downgradient wells over time would provide necessary support for this statement.
8. Section 4.1.1 refers to an investigation at the downgradient Shell Oil facility as a line of evidence. Data collected as part Shell's work included one upgradient dry-weather flow sample at manhole AAT494, where field notes indicated an observation of petroleum odor. Dry-weather flow at this location includes perennial streamflow from Forest Park, which would dilute concentrations of contaminated groundwater that enters the system above that location. Therefore, reliance on analytical data from this location provides a relatively weak line of evidence. Revision of the SCD to provide additional groundwater quality data would make a more compelling argument for the insignificance of this pathway.
9. Table 5 in the SCD summarizes the elevations of site stormwater system components, but does not provide elevation information related to the adjacent downgradient utility of most

concern, the municipal storm system that discharges to Outfall 18. Neither the SCD nor the Source Control Evaluation developed by the site provide an evaluation of the depth of site groundwater in relation to this utility. Video surveys conducted by the site were limited to the site storm system, where preferential groundwater infiltration is probably less likely. DEQ's statement in Section 4.3, that the video inspections and elevation surveys confirm that groundwater is not transported to the river, disregards the fact that work did not include an assessment the Basin 18 conveyance system. Although additional data collection may not be warranted, this pathway warrants further discussion in the SCD.

Other

10. The address listed on the first page of the SCD is incorrect, and should be changed to 3821 NW St. Helens Road.
11. The proposed SCD does not include standard language noted in other DEQ source control decisions regarding residual risk (e.g., issuance of the SCD does not constitute a no further action determination) and does not describe the limitations of the decision and possible need to reopen it. For example, the SCD issued for the Chevron Asphalt site (ECSI #1281) included the following statements:

    - "This SCD applies only to potential impacts to the Willamette River, and does not constitute a no further action finding from DEQ for all potential exposure pathways and receptors."
    - "This decision may need to be reconsidered if new information becomes available that indicates additional source control is warranted."

    Inriver cleanup goals have not yet been established and some uncertainty remains regarding the degree of source control that will be needed to meet those goals. In the event of any concern with future discharges from Outfall 18, DEQ may need to revisit sites like Christenson Oil to require a higher level of control. Providing this signal in the SCD may make that process more straightforward if necessary at a later date.

Thank you for the opportunity to review the proposed SCD and the ongoing collaboration with DEQ on identifying and controlling contaminant sources in Portland Harbor. If you have any questions, please contact me at 503-823-2296.

Sincerely,

Linda Scheffler
Water Resources Program Manager
Portland Harbor Program

c: Eva DeMaria / EPA
Kim Cox / City of Portland